



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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APPLICANT(s): Mika Rinne et al.
SERIAL NO.: 09/498,891 ART UNIT: 2665
FILING DATE: 2/7/00 EXAMINER: Molinari, Michael J.
TITLE: METHOD FOR INFORMING LAYERS OF A PROTOCOL
STACK ABOUT THE PROTOCOL IN USE

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APPELLANT'S REPLY BRIEF

(37 C.F.R. §1.193(b))

This is in response to the Examiner's Answer of 02 June 2004.

08/05/2004 HALI11 00000030 09498891

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I. RELATED APPEALS AND INTERFERENCES

The brief submitted on 21 April 2004 explicitly states that there are no related appeals or interferences on page 2.

II. CLAIMS APPEALED

Applicants appreciate that the amendment submitted with the Appeal Brief of 30 December 2003 has been entered. An updated copy of the appealed claims is included in the appendix attached hereto.

III. RESPONSE TO ARGUMENTS

The Examiner's Answer reiterates the familiar "you speak about wireless networks but do not use it as a limitation in the claims" argument. In this particular case not speaking about wireless networks in the claims is not an error or omission but a deliberate choice.

In previous arguments Applicants have taken up the difference between landline and wireless networks because it explains, how the present inventor conceived the present invention while it went unnoticed by Stevens. Having worked with landline networks only, Stevens was not exposed to the difficulties that arise from the conditions that apply to wireless transmission and was never required to considered announcing a protocol in use to other protocol layers in the same stack.

On the other hand Applicants have recognized the advantages that could be gained therethrough, because of difficulties encountered almost daily, and which brought to mind the ideas of the present invention. Applicants also noticed how certain advantages might also be gained in landline networks, so it would not be justified to only limit the applicability of the invention and the scope of protection to wireless networks.

In the question relating to the purpose of the type identifier and its availability to other layers the Examiner actually admits that the applicant's position is correct. Namely, the Examiner erroneously alleges that nothing in claim 1 would require the protocol identifier to be available to other protocol layers. In other words, the Examiner appears to essentially say that "if only claim 1 would require the protocol identifier to be available to other protocol layers, the applicant's position would be correct". Well, claim 1 indeed does require that. It requires the protocol identifier to be signalled to the second protocol layers in said protocol stack. The very same protocol stack is discussed in every instance, so this statement can only be understood to mean that the protocol identifier is made available to other protocol layers in the same stack.

The Examiner's position on signalling the type identifier to other protocol layers in Stevens is simply incorrect, because Stevens does not disclose such signalling. In Stevens, like in any other standard TCP/IP source, if a lower layer receives a sequence of bits from an upper layer and encapsulates such a sequence of bits into a data packet, the lower layer is completely indifferent and oblivious to the content and meaning

of said sequence of bits. The lower layer does not understand anything about what it just received.

The sequence of bits comes in a "black box", which the lower layer accepts without questions and throws in to an encapsulation machine. The encapsulation machine outputs a data packet having a lower layer header at its beginning and a payload part attached thereto, which payload part in this particular case may also contain a type identifier. The type identifier is in a form that only becomes understandable to the peer upper layer in the receiving device.

The Examiner's position concerning the Amri reference, starting from page 21 in the brief, confirms that the Examiner has fundamentally misunderstood the meaning of terms like "signalling" or "making available". The payload information that passes from one level to another in a protocol stack is not signaled at all in Amri, it is transferred as a part of the normal operation of the protocol stack. The whole OSI model is based on a philosophy according to which a layer can be changed in between, without affecting the operation of the immediately higher and immediately lower layers.

This has traditionally dictated a requirement that a layer not analyze or determine the meaning of something it receives from another layer, but simply accept its and encapsulates it into a hermetic package that is understandable to exactly that layer and its peer layer, but not necessarily to anything else.

Regarding the rejections for indefiniteness, the Examiner has mischaracterized Applicants arguments. Applicants disagree with the Examiners selection of the definition of "certain," and do

not concede that any of the rejections are valid, let alone the rejections for indefiniteness.

Applicants again quote MPEP 2173.02 with regard to 35 USC 112, second paragraph:

The essential inquiry pertaining to this requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of:

(A) The content of the particular application disclosure;

(B) The teachings of the prior art; and

(C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

* * *

Office policy is not to employ *per se* rules to make technical rejections. Examples of claim language which have been held to be indefinite set forth in MPEP § 2173.05(d) are fact specific and should not be applied as *per se* rules. The test for definiteness under 35 U.S.C. 112, second paragraph is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986).

Thus, the test for indefiniteness is what one skilled in the art would understand when the claim is read in light of the specification. Using that test, Applicants find no ambiguity in what one skilled in the art would understand as the invention.

For example, claim 1 recites the phrases "certain first protocol layers" and "certain second protocol layers" in the preamble, and then refers to "the first protocol layers" and "the second protocol layers" in the body of the claim. Applicants submit that it is clear that "the first protocol layers" only refers to "certain first protocol layers" and that "the second protocol layers" only refers to "certain second protocol layers." There is no ambiguity as to which protocol layers the terms refer. For these reasons, Applicants submit that the word "certain" as used in the claims does not render the claims indefinite.

The word "generally" is used in claim 13 in the context of more precisely defining a part of a protocol layer that was generally defined. This use of the word does not cause claim 13 to be indefinite.

Claim 13 recites adapting a protocol identifier so as to comprise a first element and a second element, and determining said second element so that it defines in more detail a certain part of the first protocol layers generally defined by said first element. Figure 5 and page 13, line 13 through page 15, line 13 of the present specification describes a data structure that includes bits for rough protocol identification 502 and a protocol field 503 which defines the application protocol in use. Thus, the first data structure element generally defines a part of a protocol layer and the second element more specifically defines the protocol that was generally defined by the first element.

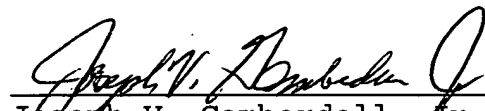
For these reasons, Applicants maintain that one skilled in the art, reading the claim in light of the specification would clearly understand what is being claimed.

Therefore, in view of the foregoing, Applicant respectfully requests that the Board reverse the Examiner's rejection of the claims and allow the case to proceed to issue as a U.S. Patent.

Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any additional fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


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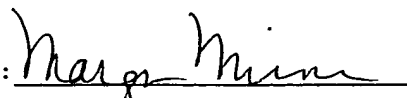
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IV. APPENDIX

The text of the appealed claims is as follows:

1. A method for transferring information over a data connection according to a protocol stack where certain first protocol layers and certain second protocol layers exist, comprising the steps of

creating a protocol identifier,

determining a value for said protocol identifier in accordance with the first protocol layers in said protocol stack and

signaling said protocol identifier to the second protocol layers in said protocol stack.

2. The method of claim 1, comprising the steps of

establishing a data connection between a first communications apparatus and second communications apparatus,

determining a value for said protocol identifier in said first communications apparatus and

signaling said protocol identifier from the first communications apparatus to the second communications apparatus.

3. The method of claim 1, comprising the steps of

establishing a data connection between a first communications apparatus and a second communications apparatus via a third communications apparatus,

determining a value for said protocol identifier in said first communications apparatus and

signaling said protocol identifier from the first communications apparatus to the third communications apparatus.

4. The method of claim 1, comprising the steps of

establishing a data connection between a first communications apparatus and a second communications apparatus via a third communications apparatus,

determining a value for said protocol identifier in said third communications apparatus and

signaling said protocol identifier from the third communications apparatus to the first communications apparatus.

5. The method of claim 1, comprising the steps of

establishing a data connection between a first communications apparatus and a second communications apparatus via a third communications apparatus and a fourth communications apparatus,

determining a value for said protocol identifier in said third communications apparatus and

signaling said protocol identifier from the third communications apparatus to the fourth communications apparatus.

6. The method of claim 1, comprising the step of signaling said protocol identifier over said data connection.

7. The method of claim 1, comprising the step of signaling said protocol identifier over a control connection which is different than said data connection.

8. The method of claim 1, comprising the step of signaling said protocol identifier in conjunction with the opening of said data connection.

9. The method of claim 1, comprising the step of signaling said protocol identifier at a certain stage after the opening of said data connection.

10. The method of claim 1, comprising the step of repeatedly signaling said protocol identifier at certain intervals.

11. The method of claim 1, comprising the steps of

determining and signaling said protocol identifier more than once during said data connection,

determining said protocol identifier at each time on the basis of a certain part of the first protocol layers, and

choosing said part of the first protocol layers such that the chosen part is not identical at all instances of determination.

12. The method of claim 1, comprising the steps of

adapting said protocol identifier so as to comprise elements and

determining each element of said protocol identifier on the basis of a certain part of the first protocol layers.

13. A method for transferring information over a data connection according to a protocol stack where certain first protocol layers and certain second protocol layers exist, comprising:

creating a protocol identifier;

determining a value for said protocol identifier in accordance with the first protocol layers in said protocol stack;

signaling said protocol identifier to the second protocol layers in said protocol stack;

adapting said protocol identifier so as to comprise elements including a first element and a second element;

determining each element of said protocol identifier on the basis of a certain part of the first protocol layers; and

determining said second element so that it defines in more detail a certain part of the first protocol layers generally defined by said first element.

14. The method of claim 1, comprising the step of placing said protocol identifier into a protocol frame of a certain protocol layer together with certain data to be transferred.

15. The method of claim 14, comprising the step of placing said protocol identifier into a field within a protocol frame which field is reserved for the protocol identifier.

16. The method of claim 15, comprising the step of placing said protocol identifier into a field within a protocol frame of a certain logical link control protocol.

17. The method of claim 1, comprising the step of determining a value for said protocol identifier in accordance with the contents of the data transferred over said data connection.

18. A communications apparatus arranged to transfer information to another communications apparatus in accordance with a protocol stack comprising certain first protocol layers and certain second protocol layers, comprising

means for creating a protocol identifier,

means for determining the value of said protocol identifier in accordance with the first protocol layers of said protocol stack, and

means for signaling said protocol identifier to the second protocol layers of said protocol stack in either said communications apparatus itself or in said other communications apparatus.

19. A communications apparatus arranged to transfer information from another communications apparatus in accordance with a protocol stack comprising first and second protocol layers, comprising

means for signaling to said second protocol layers a protocol identifier the value of which is determined in accordance with the first protocol layers of said protocol stack.

20. A data communication system comprising

a first communications apparatus and second communications apparatus

means for transferring information between said first and second communications apparatuses in accordance with a protocol stack comprising certain first protocol layers and certain second protocol layers,

at least in the first communications apparatus means for creating a protocol identifier,

at least in the first communications apparatus means for determining the value of said protocol identifier in accordance with the first protocol layers of said protocol stack, and

at least in the first communications apparatus means for signaling said protocol identifier to the second protocol layers of said protocol stack.

21. The data communication system of claim 20, wherein

the first communications apparatus is a wireless terminal in a radio access network,

said means for transferring information is arranged to signal said protocol identifier to the second communications apparatus, and

the second communications apparatus is a network element in said radio access network.

22. The data communication system of claim 21, wherein said means for transferring information is arranged to signal said protocol identifier across a radio interface of a mobile network in a call control connection.

23. The data communication system of claim 20, wherein

the first communications apparatus is a network element in a radio access network,

said means for transferring information is arranged to signal said protocol identifier to the second communications apparatus, and

the second communications apparatus is a wireless terminal in said radio access network.

24. The data communication system of claim 23, wherein said means for transferring information is arranged to signal said protocol identifier across a radio interface of a mobile network in a call control connection.